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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Dale K. Hitt

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EXAMINER

FAYYAZ, NASHMIYA SAQIB

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/693,017	Applicant(s) HITT ET AL.	
	Examiner Nashmiya S. Fayyaz	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-22 and 48-59 is/are pending in the application.
- 4a) Of the above claim(s) 15-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5-14 and 48-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1, 3, 5, 6, 9, 13, 14, 48-50, and 52-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaselskis et al- US Patent # 5,209,129. As to claims 1 and 50, Jaselskis et al. disclose a subsurface sampler 10 including a probe body (body section 14) for placement in soil having an exterior (outer surface 22) and interior (20), sensor member (sampling probe 60), a top member (removable cap 28), wherein the probe 60 is removable or retractable from the interior, see figs. 1-5 and col. 2, lines 23 et seq. Further, it is noted that the preamble recites a "wireless" sensor probe. However, since the recitation of

"wireless" is limited to the preamble, it has not been afforded the effect of a distinguishing limitation. As to claim 3, inner sleeve 32 acts to seal the portholes or act as a gasket. As to claim 5, as best understood, the inner sleeve gasket is disposed on probe body surface 22. As to claim 6, note top 17 of casing 12 could be designated a collar. As to claims 9 and 56, note screw mount (threaded top 17). As to claim 13, the shape is round shape. As to claim 14, note the raised structure (tab 40). As to claim 48, note arm 62. As to claims 49 or 55, the soil probe 60 is merely recited as for characterizing the soil and contaminant analysis. For such analysis, there are many types of sensors that are old and well-known as those listed in claims 49 or 55. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have designated the specific type of sensor being used to characterize the soil as any of those known expediciencies listed in claim 49 or 55. As to claim 50, note probe body (body section 14) with interior (20), component mast (arm 62 with probe 60) with inherent sensor circuitry and probe top (cap 28), see figs. 1-5 and col. 2, lines 23 et seq. With regard to the wireless recitation, please see discussion above with regard to claim 1. As to claim 52, note the abstract indicating usage of investigative probes. As to claims 53 and 54, positioning along the length and perimeter of the body seems inherent given the various portholes 26.

4. Claims 1, 6-14, 48-57 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chuang- US Patent # 6,601,440. As to claim 1 and 50,

Chuang discloses an apparatus for detecting saturation in soil including a probe body (housing 1) with an interior and exterior, a sensor member (sensor unit 2), see figs. 2-5 and col. 4, lines 1 et seq. Further, it is noted that a top member is not described. However, from the fig. 2 illustration, there is clearly a top member housing the control unit 3. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have designated the control unit 3 as a top member since it is on the top of housing and has threading suggesting that it is removable as well. As to claim 6, note the top portion of housing 1 upon which the top member is secured can be designated as a "collar". As to claims 7 and 57, note battery 31. As to claim 8, note transceiver (wireless transmitter 32). As to claims 9 and 56, there appears to be a screw mount given the fig. 2 depiction. As to claims 10 and 59, usage of a solar panel as a power supply is old and well-known. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a solar panel as the power supply in Chuang in order to eliminate the need for an electronic battery. As to claim 13, the shape is round. As to claim 14, note filter 14 protruding out. As to claim 48, note guide 15. As to claims 49 and 55, the sensor is a moisture sensor, see abstract. As to claim 50, note rejection above with regard to claim 1 and component mast 15. As to claim 51, note fig. 2 depiction. As to claim 52, note the reed switch 20, fins 23 comprising the

plurality of components. As to claims 53 and 54, again note fig. 2 depicting these components along a length and perimeter of the body.

5. Claims 1, 3, 5-7, 9-14, and 48-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB-2247951 (Adam). As to claims 1 and 50, Adam discloses a device 18 for measuring moisture content of soil including probe body (casing 20) with an interior and exterior, sensor member (conductive prongs 22/23 with circuit 24) and a top member (screw cap 27), see fig. 2. Further, it is noted that the device is not recited as wireless or the sensor as removable. However, as noted above "wireless" is merely recited in the preamble and is therefore being treated as an intended use clause. Further, as to the sensor being removable, the usage of a screw cap 27 suggests that the internal features of the device are removable. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have to have designated the sensor member to be removable given that the screw cap 27 allows for access to the interior of the casing. As to claims 3 and 5, usage of a gasket to seal the circuitry of the sensor is considered to have been a clear matter of design choice since gaskets are known to seal out moisture which can disrupt the electronics of the probe. As to claim 6, the top portion upon which cap 27 rests could be designated a collar. As to claims 7 and 57, note battery 25. As to claims 9 and 56, note screw cap 27. As to claims 10 and 59, usage of a solar panel to power the battery is an expediency old and well-known in field use. Therefore, it would

have been obvious to one of ordinary skill in the art at the time of the invention to have employed a solar cell to power the battery 25 to eliminate the need for a chemical battery. As to claims 11,12 and 58, note indicating means 26 and the usage of liquid crystal ink. As to claim 13, the shape appears round. As to claim 14, note prongs 22/23 protruding out of the body. As to claim 48, note electronic circuit 24 in the shape of a mast. As to claims 49 and 55, the sensor is a moisture sensor. As to claim 50, note claim 1 rejection above and sensor mast of circuit 24 with prongs 22/23. As to claim 51, note the mast extends to the cap 27 via battery 25. As to claim 52, note prongs 22/23. As to claims 53 and 54, prongs extend the length and periphery.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1, 3, 5-14, and 48-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 1 and 50, it is still unclear what is being designated as the "sensor member" as in fig. 7. Is it the sensor 760 of fig. 7, if so, how is it removable? Are the sensors 760 in addition to the sensor mast? In claim 5, how is the "gasket disposed on the sensor member"? In claim 7, how does the sensor member comprise a battery?

In claim 8, where is the transceiver circuit even depicted in the top member? In claim 9, the “probe top part” lacks antecedent basis.

Specification

8. The disclosure is objected to because of the following informalities: on page 1, in par[2], the blanks need to be filled in.

Appropriate correction is required.

Response to Arguments

9. Applicant's arguments with respect to claims 1, 3, 5-14 and 48-59 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nashmiya S. Fayyaz whose telephone number is 571-272-2192. The examiner can normally be reached on Mondays and Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. S. F./

Examiner, Art Unit 2856

/Hezron Williams/

Supervisory Patent Examiner, Art Unit 2856